DOCUMENT RESUME

ED 175 950 UD 019 507

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TITLE Identifying Classroom Climates of Acceptance in Desegregated Schools.
PUB DATE 12 Apr 79
NOTE 46p.; Not available in paper copy due to print quality of the original document; Paper presented at the Annual Convention of the American Educational Research Association (San Francisco, California, April 12, 1979)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Black Students; Caucasian Students; *Classroom Environment; Classroom Integration; Elementary Secondary Education; Friendship; *Integration Effects; Peer Relationship; *Race Relations; School Integration; *Social Relations; *Student Behavior; *Teacher Role; Verbal Communication
IDENTIFIERS *Indiana (Indianapolis)

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MAY 2 5 1979

Identifying Classroom Climates of Acceptance in Desegregated Schools*

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Abstract

The goal of this study was to investigate the nature of classroom climates of acceptance in desegregated schools. Verbal initiations and student friendship choices across race and sex were examined in 41 seventh and eighth grade classrooms in Indianapolis, Indiana. Teachers were also interviewed and completed an attitudinal questionnaire. Factor analysis of the verbal initiation and sociometric data revealed some clear-cut patterns of interracial friendship and verbal interaction. A cluster analysis identified four distinct classroom climate types which ranged from a low to a high level of acceptance across race/sex groups. Teacher characteristics and behaviors which accompanied the different levels of interracial attraction among students were identified for each classroom climate type.

Presented at the Annual Convention of the American Educational Research Association, San Francisco, April 12, 1979.

*I wish to thank the administration, teachers, parents and students in the Indianapolis School System who gave their support and cooperation in this study. I also wish to thank Lee Ehman and Dave Lambert for their extensive assistance in the conceptualization of the study and in the data analysis, and the Spencer Foundation for providing funds for this research.

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Goals and Rationale

Desegregated classrooms are potentially threatening learning environments. Most parents and educators would agree that students learn best in classrooms where they feel unthreatened and accepted by their teachers and classmates. Research inside desegregated classrooms suggests that the academic success of minority group students is contingent upon their acceptance into the majority group peer structure (St. John, 1971; Weinberg, 1977). The superiority of desegregated over segregated schooling is conditional upon such variables as the attitudes and behavior of the teachers and of other children in the classroom.

While the importance of classroom "climates of acceptance" in desegregated schools seems obvious, little is known about the specific nature of such climates and the teacher and student characteristics and behaviors necessary to achieve it. Therefore, with the goal of investigating the nature of classroom climates of acceptance in desegregated schools, a study was launched in five junior high/middle schools in Indianapolis, Indiana. The study focused on two dimensions of classroom climate, student initiations and friendship choices across the lines of race and sex, and explored their relationship to a number of teacher variables. An important aim of the study was to identify teacher behaviors and characteristics which might relate to interracial attraction among students.

Although research related to "climates of acceptance" in desegregated classrooms is scarce, existing studies consistently indicate that a focus on teacher behaviors and patterns of teacher-pupil and pupil-pupil classroom interactions is necessary and appropriate. The importance of cross-racial friendship for the academic success of minority group students has been documented by St. John (1971) in her study of school integration, classroom climate, and achievement. Recent studies by Gay (1974), Rist (1970), and the U.S. Civil Rights Commission (1973) all indicate that most teachers tend to interact differently with students according to the race, ethnicity, and perceived socioeconomic status of students. This research reveals that, whether intentionally or unintentionally, many teachers act in ways that inhibit the learning opportunities of the poor, Black, and Mexican-American students.

Other bodies of research indicate that pupil classroom initiations are related to pupil knowledge gains, attitude change, and climate variables (Button, 1974; Cohen, 1978; Ehman, 1970). However, the relationship between student initiations and friendship patterns in desegregated classrooms has not been explored. This study's focus on student initiations as an indicator of "acceptance" was based on the assumption that most students will initiate questions and statements only if they feel unthreatened ("accepted") in the classroom environment.

Climates of Acceptance

A climate of acceptance was defined as a classroom environment characterized by the following pupil behaviors:

1. Cross-racial and cross-sexual friendship choices.
2. Frequent initiations (verbal statements or questions directed at the teacher or students), regardless of race or sex.
3. Cross-racial and cross-sexual targets of verbal initiation.

Relationships between these pupil behaviors and the following teacher characteristics and behaviors were explored:

1. Equal teacher expectancy of Black and White pupil success.
2. Orientation to individual and cultural needs of students.
3. Viewpoint (authority centering vs. authority sharing), Warmth-Spontaneity, Organization, Stability, and Involvement.[1]
4. Ratio of teacher to student verbal initiations.
5. Ratio of Black to White targets of teacher's verbal initiations.
6. "Teacher competence."[2]

Methods and Techniques

Forty-one seventh and eighth grade teachers were selected from five junior high/middle schools located in Indianapolis, Indiana. Three criteria were used in choosing the five target schools: a student population containing 20-50% Black students,

a minimum of three possible language arts and/or social studies teachers (a logistical factor), and willingness of the principal to participate in the study (none refused). In one school, all language arts, social studies, math, and science teachers volunteered to participate. In three schools all language arts and social studies teachers agreed to participate. In the fifth school, one science, one math, one social studies and two language arts teachers agreed to participate. Of the forty-six teachers invited to participate, only two declined. Three teachers were lost due to logistical problems. Thus, since nearly all possible teachers agreed to participate, the sample of teachers was not unduly biased by teacher willingness to take part in the study. Thirty-two of the forty-one teachers had between three and fifteen years of teaching experience.

Each participating teacher was observed for five hours by trained coder-observers in the classroom with the same group of students.* Observations were made at random during a 3-6 week period on days when films, tests, or guest speakers were not scheduled. During 200 minutes of the observation time, teacher's and student's interactions were coded using a simplified version of the Student Initiated Classroom Interaction Schedule, the SICI (Button, 1972). The SICI is designed to identify initiation frequencies and the ratio of student initiations (questions and/or statements) to teacher initiation. Since the recording of each interaction includes the student's I.D. number, comparisons of student initiations

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*There were four coder-observers. Inter-coder reliability was assessed bi-weekly, at .95 or better.

according to sex and race were possible. Initiation targets as well as the nature (procedural, information, values, personal) and affect (positive, neutral, negative) of each initiation were also noted.** Coders used the remaining 100 minutes of observation time to become acquainted with the classroom, develop seating charts, and identify the teacher's teaching style using Ryan's classroom observation scale, the T modified version of Ryan's Characteristics of Teachers Scale (Ryans, 1960).

After all of the observational data had been collected, teachers completed an attitudinal questionnaire, Form E67 of the Behavioral Dimension of Teaching Characteristics Schedule (Turner, 1968), and were interviewed by the principal investigator. Upon completion of the interview, each teacher administered a sociometric test.

Approximately 1500 pupils completed the sociogram, which has been used in other research to measure interracial friendships (St. John, 1971). Results illustrate the degree to which pupils are accepted by their own race and/or sex group and by the opposite race and/or sex.

Finally, a random sample of 123 pupils, stratified according to sex, race and teacher, was selected for an in-depth personal interview. The interviews used semi projective techniques to explore pupil perception of the social climate of the classroom, self image, and feelings of acceptance by the teacher and classmates.

**Only the target data are analyzed in this paper.

Results

Patterns of Cross-Racial Friendship Choices

Students in participating classrooms were given an alphabetized list of students on the class roster. Each participating classroom teacher read the following statement:

> "Please put a 1 by the names of all your very best friends in this class. Now put a 2 by the names of your good friends (not best friends, just good friends). Now put a 3 by the names of kids who are not your friends but who are okay. Now put a 4 by the names of kids you don't know very well."

Students were instructed to give every classmate a number. The subtle difference between a 3 and a 4 was assumed to mean that students were given a 4 when they were not perceived to be "okay." An index of interracial friendship was computed for each classroom.[3]

For the population as a whole, friendship choices were strongest and most frequent within the same sex and race (See Table 1). White females were a striking exception, appearing to be the least cliquish about race and sex but perhaps the most cliquish toward each other (i.e. high frequency of best friends for some White females is accompanied by an even higher frequency of "rejections," for other White females.)

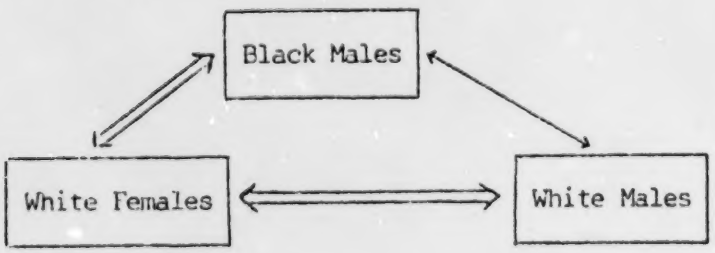
Insert Table 1 about here

Sex was more important than race in making friendship choices outside one's own race/sex group. Black males tended to choose White males over Black females, and infrequently chose White females. Black females tended to choose White females over Black males, and rarely chose White males. White males chose Black males much more frequently than they chose either Black or White females, though they more often chose the later. White females most preferred Black females. Their next strongest preference was Black or White males (over White females).

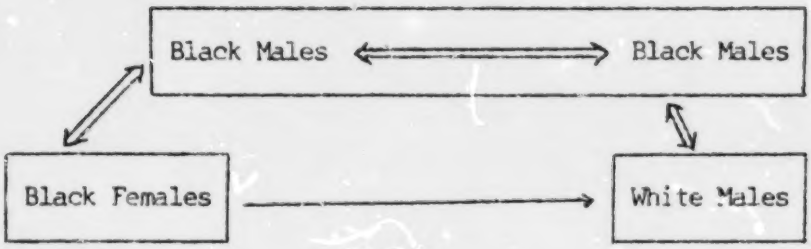
Factor analysis of the sociometric data revealed five orthogonal factors depicting five different friendship patterns which existed in the classrooms studied (See Table 2). These factors, which are displayed below,[4] accounted for 75% of the common factor variance.

Insert Table 2 about here

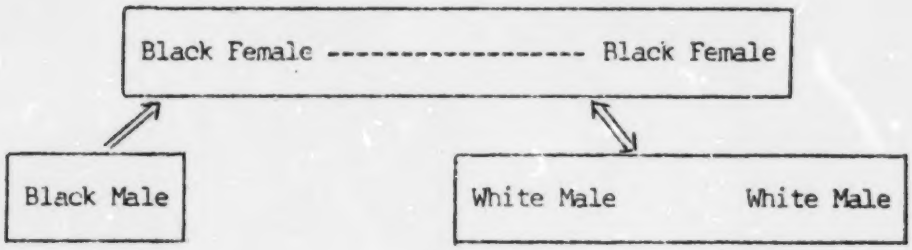
SOCIOMETRIC FACTOR ONE: Interracial friendship choices are frequent among everyone except Black females.



SOCIOMETRIC FACTOR TWO: Black males have reciprocal friendship choices with each other, Black females, and White males. White females are not included.

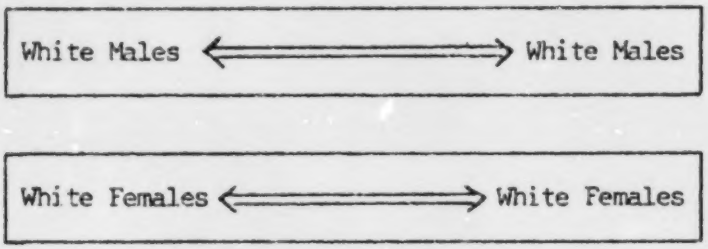


SOCIOMETRIC FACTOR THREE: Black females are negative toward each other and are the friendship targets of Black and White males. White males are negative to each other. Black females reciprocate White male friendship choices.



SOCIOMETRIC FACTOR FOUR: Reciprocal friendships exist between Black and White females.

SOCIOMETRIC FACTOR FIVE: Reciprocal friendships exist between White males, and reciprocal friendships exist between White females.



The sociometric factor which reflects the strongest pattern of interracial friendship excludes Black females. White females and Black and White males all choose each other, and these cross race/sex choices occur more frequently than same race/sex friendship choices.

A second sociometric factor shows a strong pattern of reciprocal friendship choice among Black males, between Black males and Black females, and between Black and White males. In this case, White females are excluded and, the triangle is not complete (as it was in the first factor) because Black females and White males are not choosing each other.

A third factor shows Black females rejecting each other and White males rejecting each other. This is the one pattern which reveals strong reciprocal friendship choices between Black females and White males.

There exists a fourth pattern which shows frequent reciprocal friendship between Black and White females. This is the only pattern which shows friendship choice between the female groups. No comparable pattern was discovered for males.

Finally, the fifth factor showed a pattern of reciprocal friendship between White males, which was separated from a pattern of reciprocal friendship between White females. Comparable patterns were not found for either Black males or Black females.

Patterns of Student Verbal Initiations

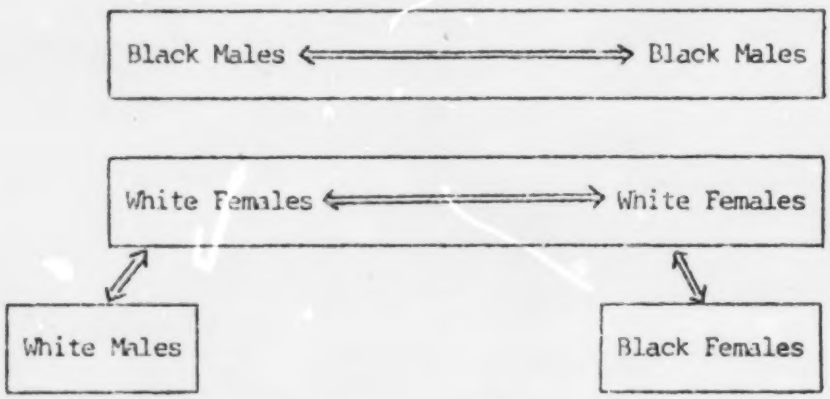
In most observed classrooms, there were more White than Black students. Therefore, a sample of "target" White students was randomly selected to equalize the number of Black and White students whose initiations were coded. Sex was also balanced as much as possible. Coders tallied every initiation made by each targeted Black and White student, and by the teacher. The target of each initiation was also recorded. For each classroom, initiation frequencies were tabulated to show the total number of initiations made by each race-sex group and how many of these were directed at Black males, Black females, White males, White females, and the teacher. The frequency of teacher initiations and targets in each race/sex category were also noted.

For the population as a whole, Black males initiated most and White males and females least (See Table 3). Approximately half of all students' initiations were directed at the teacher (See Table 5).

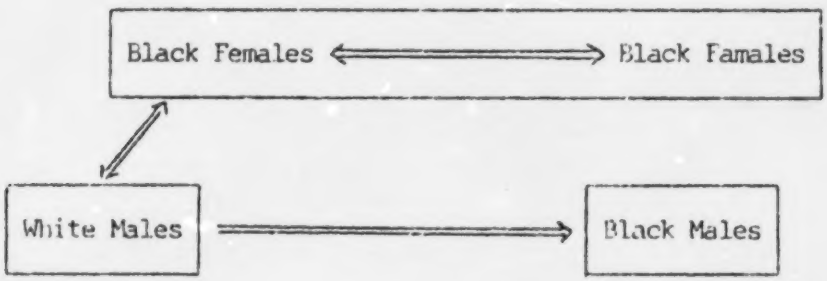
When students' initiations were directed at other students, approximately 3/4's of the targets were within the students own race/sex group. The smallest proportion of interaction was between White males and Black females.

Factor analysis of the student initiation data identified five oblique factors which accounted for 76% of the common factor variance. These factors are displayed in Table 4 and are as follows:

INITIATION FACTOR I: Student initiations are mostly intraracial, except for interaction between Black females and White females.



INITIATION FACTOR II: Interracial initiations are frequent between Black females and White males, who also initiate to Black males. These are accompanied by frequent initiations among Black females.



INITIATION FACTOR III: Black males and White females frequently initiate to each other.

INITIATION FACTOR IV: Black and White males frequently initiate to each other.

INITIATION FACTOR V: Black males and Black females frequently initiate to each other.

Insert Table 4 about here

Three distinct initiation factors display patterns not repeated in the sociometric factors: frequent initiations between Black males and White females, between Black and White males, and between Black males and Black females. The factor which displays the most interracial initiation involves frequent exchange among Black females and between Black females and White males, who initiate to Black males. The triangle is not complete (Black males and females do not initiate to each other frequently), and White females are excluded. The initiation factor with the highest loadings is basically intra racial, with the exception of initiations between Black and White females.

Overall, it appears that while the Black females tended to be left out of the friendship network in the classrooms studied, they were in the hub of student initiation. White females, on the other hand, were more a part of the classroom friendship network than of the verbal interaction among students.

Relationships Between Student Initiations, Student Friendship, and the Teacher Variables: Four Classroom Climate Types

In order to examine how the sociometric and initiation factors combined with each other and with the teacher variables, the forty-one classrooms were entered into a cluster analysis (Veldman, 1967).

This analysis identified four classroom climate types which typified the study's population. Each type, or cluster of classrooms, was first defined in terms of the amount and range of student initiations and friendship choices which crossed race and sex.

A climate of "low acceptance" is one which shows a lower than average (for this study's population) amount of student initiations and friendship choices outside the student's race/sex group. A climate of "moderate acceptance" is one which shows more than average friendship choices across all race/sex groups for at least one race/sex group plus a weaker than average trend toward initiations within race/sex group. A climate of "high acceptance" is one which shows a markedly higher than average amount of friendship choice within and across all race/sex groups accompanied by a moderate amount of initiation targets across race/sex group for two or more race/sex groups. A climate of "high-mixed acceptance" is one which shows well above average frequencies of friendship choices and initiation targets across race and sex (i.e., between Black males and White females) accompanied by general low levels of within race/sex initiation targeting and friendship choice.

Thirty-five of the forty-one classrooms fit into one of the four classroom climate categories: eight into Type 8 (moderate acceptance), sixteen into Type 16 (low acceptance), six into Type 6 (high acceptance), and 5 into Type 5 (high-mixed acceptance). The remaining six classrooms revealed extreme and unique patterns

on many of the study's variables and are regarded as exceptions in this population.

The teacher characteristics and behaviors which clustered with the student variables were then examined to complete the definition of each Classroom Climate Type. Diagram A presents an overview of the Classroom Climate Type definitions.

Insert Diagram A about here

Patterns of Student Initiations and Friendship In Each Classroom Climate Type

Initiations. Table 3 summarized the patterns of student initiations within a whole. However, as shown in Table 5, these overall patterns break down in the cluster analysis.

Insert Table 5 about here

Within Classroom Type 8 (climate of moderate acceptance), the tendency toward targeting within sex/race group is relatively weak. Black males initiate slightly more than the average amount for Black males and clearly dominate the student initiation. Although the initiation frequencies for Black females and White males and females is low, the frequency of each group's cross race/sex targeting is relatively high except between Black females and White males. The proportion of teacher targets is high, and above average for all groups except White males.

The initiation patterns within Classroom Type 16 (climate of low acceptance) represent a contrast. Here, student targets within sex/race group are markedly high. (i.e., These same sex/race means are 3-5 times as high as the frequency means toward any other target group.) Although Black males still dominate slightly, Black females and White males and females all initiate closer to the average amount than they do in Type 8. In addition, the proportion of teacher to student targets is much lower than in Type 8, with students initiating to students (usually within own sex/race group) much more frequently in Type 16. Thus, it appears that in climates where students feel free to initiate, and do in fact do so, they are not necessarily more inclined to initiate across race.

The student initiation in Classroom Type 6 (climate of high acceptance) is strikingly dominated by both Black and White males. (As will become evident, this classroom type is also characterized by striking patterns of interracial friendship among all the race/sex groups.) The males initiate approximately twice as frequently as Black females and three times as much as White females. As in Type 8, most initiation is directed at the teacher. Those initiations directed at students show a trend of same race/sex group targeting accompanied by interaction between Black and White males, and Black males and Black females. White females appear to interact almost exclusively with White females.

Classroom Type 5 (high-mixed acceptance) is characterized by a great deal of targeting across race and sex, except that there is almost none between Black females and White males. White females and Black males dramatically dominate the interaction, even though Black females and White males both initiate an average amount. White females initiate more frequently in this classroom type than in the other three. The proportion of teacher targets is strikingly low for this population, with 1/2 - 3/4 of the initiations being directed at other students.

Friendship Choices. As was revealed in Table 1, friendship choices are strongest and most frequent within the same sex and race, with the striking exception of White females. However, as with the findings on student initiations, the overall population patterns break down in the cluster analysis (See Table 6). In some classroom types interracial attraction is as strong as intraracial attraction, and this is accompanied by either same sex or cross sex friendship choice.

Insert Table 6 about here

Classroom Types 8 (climate of moderate acceptance) and 16 (climate of low acceptance) are again nearly opposites. In Type 16, the trend is friendship choice within race/sex group for Black males, Black females, and White males; this is not accompanied by a trend toward friendship choice across race and/or sex groups.

In Type 8 classrooms, the within race/sex group preference holds for Blacks but not for Whites, and among Black males it is accompanied by higher than average friendship choices of Black females, White males, and White females. Thus we see a higher degree of interracial friendship in Type 8 classroom, largely due to Black males. We also see that in Type 16 classrooms, White females have stronger preferences for each other, Black females and White males.

Type 6 classrooms (climate of high acceptance) contain a striking pattern of friendship both across and within each race/sex group. The friendship index means are well above average in every possible race/sex category. Thus Type 6 classrooms exemplify the broadest and strongest picture of acceptance and reveal that strong in-group preferences do not preclude out-group preferences and may even be a requisite.

Type 5 classrooms (high-mixed acceptance) are unique in that friendship choices are stronger outside the race/sex group than within it. Most notable are the strong preferences among Black males and White females, the two groups who also dominate student initiation. The same race/sex friendship mean is below average for all four groups. White males show a tendency toward friendship with Black and White females. Thus among Black and White males there is a pattern of interracial friendship with the opposite sex, but not with each other. Among females, friendship choices cross race and sex.

Table 7 reveals which sociometric factors and which initiation factors tend to characterize each Classroom Climate Type. As we

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Insert Table 7 about here

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would expect, sociometric factors which indicate interracial attraction typify groups 5, 6, and 8, the climates of acceptance. Factors 1 and 4 occur in 5 and 6; Factor 2 occurs in 8 and 6. Furthermore, group 6 classrooms are typified by each of the sociometric factors. This too would be expected since strong friendship attraction within and across all race/sex groups was found in these classrooms.

Sociometric Factor 2, which reflects attraction between Black and White males, is low in Types 16 and 5, and this also is expected. And, absent in groups 8 and 5 is Sociometric Factor 5 (separate patterns of attraction among White males and among White females).

The initiation factors also cluster in patterns we would expect. For example, the largely intraracial Factor 1 is absent in Types 8 and 6, and present in Type 16 classrooms. It is most evident in Type 5 classrooms, along with Factor 3 (initiation targeting among Black males and White females). As would be expected, Factors 4 (initiation among Black and White males) is absent in Type 16. Factors 4 and 5 (initiation among Black males and females) are also absent in Type 5 classrooms where verbal and sociometric attraction between Black males and White females is high.

The Teacher Variables. Teacher warmth and spontaneity, teacher involvement, equal expectancy, and frequent initiation appear to be associated with the student variables which characterize classroom climates of acceptance. Table 8 displays the teacher variables which typify each classroom climate type. Teachers

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Insert Table 8 about here

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in Type 8, Type 6, and Type 5 classrooms scored above the mean on "warmth-spontaneity," and teachers in Type 16 (low acceptance) classrooms scored below. In this study teachers who are warm, friendly and stimulating and engage in imaginative or resourceful responding in a social context are more likely to create a climate of interracial friendship and initiation than teachers who are low in these characteristics.

Again, teachers in Type 8, Type 6, and Type 5 classrooms (the higher acceptance types) scored at or above the mean on "involvement", while teachers in Type 16 classrooms scored below. It appears that the more the teacher identifies with or is involved in his or her work, the more likely he or she will create a classroom climate of acceptance.

Teachers in Type 16 classrooms show a stronger tendency toward unequal expectancy of Black and White students' learning potential and toward a higher expectancy for White students. Seventy-five to one hundred percent of teachers falling into the three "acceptance" clusters express equal expectancy, while 57% in Type 16 do so.

Finally, it appears that teacher initiations are also related to classroom climate. Two of the climates showing acceptance, Types 8 and 6, contain teachers who initiate an average to well above-average amount. In both cases the teachers initiate slightly more than the students. Although Type 8 represents a climate of only "moderate" acceptance, it represents along with Type 6 the broadest picture of acceptance across and within different race/sex groups. Type 16 teachers initiate less than an average amount, and approximately one-third as often as their students. This pattern is even more pronounced among teachers in "high-mixed acceptance" classrooms, where Black males and White females dominate interaction and show the strongest cross race/sex attraction.

The remaining teacher variables: organization, viewpoint, stability, student need orientation and overall "competence" do not appear to be clearly associated with climates of acceptance or non-acceptance. It is worth noting, however, that teachers in the Type 6 cluster (climate of high acceptance) were rated markedly high on teacher "competence".

Summary and Conclusions

This study indicates that patterns of cross-racial initiation and friendship are useful concepts for defining classroom climates of acceptance. A number of clear-cut patterns of student friendship choice and verbal initiation were identified in the 41 observed classrooms. These patterns (the sociometric and initiation factors) were examined in a cluster analysis along with the teacher variables,

and fell into four distinct clusters of classroom climate types which represented levels of interracial acceptance among the students.

The largest cluster of classrooms, Type 16, represents a climate of low acceptance. The cluster of eight showed at least moderate acceptance and the clusters of six and five classrooms showed high or high-mixed acceptance.

Student initiations were selected as an indicator of acceptance because it was assumed that most students will initiate only if they feel unthreatened, or accepted in the classroom environment. The findings indicate that students' initiations are an important, but not sufficient indicator of acceptance. In Type 16, there is a high degree of student initiation but most of it is within race/sex group. In Types 6 and 5, there is a high degree of student initiation and a good deal of it is directed at students outside the race/sex group. Comparing the high and low acceptance Types further, we see that the sociometric indices are also higher in Types 6 and 5. Apparently, friendship attraction across race and sex is a requisite for intergroup initiation. Conversely, patterns of student initiation can provide a fairly clear clue to the more hidden patterns of interracial friendship.

The study clearly suggests that teachers have a lot to do with classroom climate in desegregated schools. The findings are consistent with other research which shows the importance of equal expectancy for students' success, and warmth-spontaneity or humanness (St. John, 1971). Teachers in the "acceptance" climates do not distinguish between the learning potential of their

Black and White students, and they score high on measures of warmth-spontaneity. These teachers identify with and are involved in the teaching profession, and tend to dominate classroom interaction.

However, it is likely that factors over which teachers have no control (such as community environment and busing patterns) strongly influence the social climate of a school and the classrooms within. Although the four classroom climate types were distributed across all five schools, there were two expections. In one school, all of the target classrooms fell into cluster 6 or 5, the "high acceptance" classroom climates. In the second school, the one school just initiating desegregation, three of the four participating classrooms fell into Cluster 16, "low acceptance." (The fourth classroom was one of the six extreme cases and did not fall into a cluster.) This lends support to other research which suggests that grades 4-8 are the most difficult stage to introduce racial desegregation (Hawley, 1978). We also find in junior high/middle school cultures the interracial phenomenon of attraction between White females and Black males and distancing between Black females and White males that often characterizes adult relationships (Cleaver, 1968; Cobbs and Grier, 1968). This is captured in Classroom Type 5. Finally, it is noteworthy that 10 of the classrooms in the Type 16 cluster are from an architecturally open school. Over half of this school's 17 participating classrooms fell into

Type 16; two fell into each of the other three clusters and one was an "extreme" case. This suggests that in an open environment, it is more difficult for teachers to be the strong, initiating, and stimulating type that is associated with a climate of acceptance in this study.

In conclusion, this study adds to our knowledge about what happens inside desegregated schools. Where classroom climates of acceptance exist, the teachers tend to be strong, dominant, fair, warm, spontaneous and committed. The students show an attraction to their own race and sex, and are attracted to and interact with students of the opposite race and sex as well.

The two student indicators of interracial acceptance, verbal initiations and friendship choices, appear to be focal concepts we can use to further our knowledge about human dynamics in desegregated classrooms. What should teachers do to create a "climate of acceptance" in desegregated classrooms? More research is needed before this question can be adequately answered. However, this study indicates that teachers who wish to promote interracial attraction should not be afraid to dominate their classrooms. They should also encourage a good deal of student initiation. In addition, they should be fair, warm, spontaneous, and involved in their profession.

Diagram A
Overview of the Cluster Analysis

	Highlights of Student Initiation Patterns	Highlights of Student Friendship Patterns	Highlights of Teacher Characteristics	Highlights of Teacher Behaviors
CLASSROOM TYPE 8 (Moderate Acceptance)	•Black males are dominant •High proportion is directed at teacher (except among White males) •Strong pattern of targeting across race and sex	•Among Blacks, but not Whites, strongest pattern is within race/sex group. •Black males choices frequently across both race and sex groups. •High level of rejection among White females.	•Score high on warmth/spontaneity, stability, involvement, equal expectancy, and need orientation •Score close to population mean on organization •Score well below population mean on viewpoint •100% express equal expectancy for Black and White students' learning potential	•Initiate an average amount •Initiates slightly less than students •Rating on Teaching Effectiveness (Ryans total) is below mean
CLASSROOM TYPE 16 (Low Acceptance)	•Black males are slightly predominant, all other groups are near population mean •High proportion is directed at other students •Strong pattern of targeting within race and sex	•Among Blacks, and White males, strongest pattern is within race/sex group •Black male choices less frequently cross race and sex groups	•Score below mean on warmth/spontaneity and involvement •Score above mean on organization and viewpoint and equal expectancy and need orientation •Score close to mean on stability •57% express equal expectancy for Black and White students learning potential; 7% favor Black students, 34% favor White students	•Initiates less than average •Initiates approximately one-third as often as students •Rating on Teaching Effectiveness (Ryans total) is at mean
CLASSROOM TYPE 6 (High Acceptance)	•Black and White males are highly predominant •High proportion is directed at teacher •Pattern of targeting within race and sex except between Black and White males •White females appear isolated	•Striking pattern of interracial friendship for each sex group, accompanied by population's •Strong pattern of friendship within own race/sex group •Population's highest sociometric index in every race/sex category	•Close to mean on warmth/spontaneity and involvement •Below mean on organization and equal expectancy •Above the mean on viewpoint and stability •75% express equal expectancy for Black and White students, 25% favor Black students	•Initiates more than twice the average amount •Initiates slightly more than students •Rating on Teaching Effectiveness (Ryans total) is well above mean
CLASSROOM TYPE 5 (High-Mixed Acceptance)	•Black males and white females are highly predominant •Very high proportion is directed at students, especially among Black males and White females •Strong pattern of targeting across race and sex, expect almost none between Black females and White males	•Frequent choices between Black males and White females •Among males, an overall pattern of interracial friendship •Among females, friendship choices across race and sex	•Score close to mean on warmth/spontaneity and viewpoint •Score above mean on organization, involvement, and equal expectancy •Score below mean on stability and need orientation •80% express equal expectancy for Black and White students learning potential, 20% favor White students	•Initiates approximately one-half the average amount •Initiates approximately one-fourth as often as students •Rating on Teaching Effectiveness (Ryans total) is well below mean

TABLE 1

Summary of Student Friendship Index Means by Race/Sex Group

Variable	Mean	Standard Deviation	Cases
Black Male-Black Male	.2817	.1715	41
Black Male-Black Female	-.0270	.2605	41
Black Male-White Male	.0267	.2869	41
Black Male-White Female	-.2910	.4637	41
Black Female-Black Male	-.1013	.2282	41
Black Female-Black Female	.2746	.3475	41
Black Female-White Male	-.3163	.2097	41
Black Female-White Female	-.0592	.1905	41
White Male-Black Male	-.0096	.2200	41
White Male-Black Female	-.3422	.3181	41
White Male-White Male	.1700	.2915	41
White Male-White Female	-.2358	.2339	41
White Female-Black Male	-.3142	.3625	41
White Female-Black Female	-.0286	.1655	41
White Female-White Male	-.2487	.3500	41
White Female-White Female	-7.0804	14.5561	41

Factor Analysis of Sociograms Via Index of Interracial Friendships

VARIABLE	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5
Black Male to Black Male	-.00272	-.057430	.24857	-.01059	.08638
Black Male to Black Female	.14041	.53512	.47083	-.25402	.11510
Black Male to White Male	.23226	.78538	.16913	.04969	.00013
Black Male to White Female	.92011	.17056	-.00982	-.05745	-.08880
Black Female to Black Male	.07038	.44128	.06419	-.04573	.01497
Black Female to Black Female	.17648	-.04982	-.55645	.38577	.20410
Black Female to White Male	-.16509	.37213	.64916	.10588	-.00340
Black Female to White Female	-.01721	.11377	-.18171	.95613	.00517
White Male to Black Male	.14688	.83892	-.12421	.21318	-.01836
White Male to Black Female	.06542	.10007	.87848	-.00307	-.03127
White Male to White Male	.08311	.28397	-.31671	.10441	.73595
White Male to White Female	.74043	.18966	.01790	.02991	.35839
White Female to Black Male	.94112	.09912	.00187	.11983	-.02890
White Female to Black Female	.10224	-.01023	.08786	.48850	.33445
White Female to White Male	.91701	.06686	-.14134	.08467	.19392
White Female to White Female	.17433	-.27522	.19019	.30443	.44134

FACTOR	EIGENVALUE	PERCENTAGE OF VARIANCE	CUMULATIVE PERCENTAGE
1	4.22364	26.4	26.4
2	3.18628	19.9	46.3
3	1.99356	12.5	58.8
4	1.60601	10.0	58.8
5	1.02711	6.4	75.2

TABLE 3

Summary of Student Initiation Means By Race/Sex Group

Variable	Mean	Standard Deviation	Cases
Black Male-Black Male	26.7561	31.6281	41
Black Male-Black Female	10.7805	12.4489	41
Black Male-White Male	7.4146	6.1399	41
Black Male-White Female	5.7805	13.2089	41
Black Female-Black Male	8.3171	10.8546	41
Black Female-Black Female	24.0244	34.9246	41
Black Female-White Male	3.7317	5.2442	41
Black Female-White Female	7.8780	10.1912	41
White Male-Black Male	6.5122	6.3997	41
White Male-Black Female	3.6829	5.4150	41
White Male-White Male	20.4390	34.5500	41
White Male-White Female	8.3171	11.2682	41
White Female-Black Male	6.5122	11.2985	41
White Female-Black Female	6.5585	8.6389	41
White Female-White Male	8.5122	11.7774	41
White Female-White Female	20.7317	28.4324	41

Factor Analysis of Student Initiation Data

VARIABLE	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5
Black Male to Black Male	.38966	.28505	.03168	-.29216	-.22557
Black Male to Black Female	-.08924	.05333	.07239	-.33651	-.75245
Black Male to White Male	-.08068	.13582	.15753	-.45538	-.05643
Black Male to White Female	.00983	-.33845	.77253	-.02405	.14327
Black Female to Black Male	.05974	-.24533	-.02605	.25830	-.73165
Black Female to Black Female	.31851	-.58072	-.07389	-.09863	-.10278
Black Female to White Male	.01595	-.87386	.09120	.04004	-.24762
Black Female to White Female	.49385	-.21448	-.03398	-.18324	-.19440
White Male to Black Male	.08727	-.41534	-.09779	-.86585	-.10955
White Male to Black Female	-.08072	-.90516	.32464	-.08867	-.01196
White Male to White Male	.16151	-.27379	-.26639	-.15775	-.31451
White Male to White Female	.93849	-.18640	-.15342	.03982	.20753
White Female to Black Male	.11737	-.02865	.78823	-.06180	-.14672
White Female to Black Female	.40931	.22124	.27705	-.15852	-.20348
White Female to White Male	.88546	.08559	-.02056	.00833	-.00219
White Female to White Female	.71519	.05755	.20974	.11710	-.01552

FACTOR	EIGENVALUE	PERCENTAGE OF VARIANCE	CUMULATIVE PERCENTAGE
1	5.49898	34.4	34.4
2	2.29170	14.3	48.7
3	1.98580	12.4	61.1
4	1.35740	8.5	59.6
5	1.04623	6.5	76.1

TABLE 5

Summary of Student Initiation Frequency Totals and Means of Targets by Race and Sex for Each Classroom Climate Type (Group)

Classroom Type	Black Males						Black Females						White Males						White Females					
	Total*	To Teach	To BM	To BF	To WM	To WF	Total	To Teach	To BM	To BF	To WM	To WF	Total	To Teach	To BM	To BF	To WM	To WF	Total	To Teach	To BM	To BF	To WM	To WF
Total Population	112	54	27	11	7	6	90	40	8	24	4	8	92	46	7	4	20	8	77	33	7	7	9	21
Moderate Acceptance	116	77	11	7	7	4	73	43	5	9	2	6	66	39	7	2	5	4	68	43	4	6	3	7
Low Acceptance	99	48	27	5	6	3	86	43	5	22	4	5	86	40	4	3	22	10	79	31	5	5	9	26
High Acceptance	105	77	7	4	6	1	57	35	5	9	2	2	115	85	6	2	13	2	43	26.5	1	1	1	6
High-Mixed Acceptance	164	48	76	20	14	10	91	42	11	18	2	18	85	48	11	2	15	9	128	36	20	19	19	34

*Includes initiations directed at class as a whole and at specific targets

TABLE 6

Summary of Sociometric Index Means by Classroom Climate Type (Group)

Friendship Choices By Race and Sex

Classroom Type	Black Male to:				Black Female to:				White Male to:				White Female to:			
	BM	BF	WM	WF	BM	BF	WM	WF	BM	BF	WM	WF	BM	BF	WM	WF
Total Population	.28	-.03	.03	-.29	-.10	.28	-.32	-.06	-.01	-.34	.17	-.24	-.31	-.03	-.25	-7.08
Moderate Acceptance	.30	.08	.11	-.13	-.05	.23	-.35	-.24	.01	-.42	.04	-.32	-.33	-.17	-.30	-18.56
Low Acceptance	.27	-.13	-.14	-.39	-.20	.22	-.39	-.09	-.11	-.42	.23	-.25	-.35	-.02	-.23	-5.31
High Acceptance	.43	.24	.41	-.03	.00	.34	-.11	.10	.25	-.13	.37	-.06	-.15	.12	-.07	-.28
High-Mixed Acceptance	.23	-.14	.01	-.03	-.12	.18	-.30	.08	-.02	-.15	-.10	-.22	-.11	.00	-.17	-7.29

Note: The sociometric index is a measure of attraction developed from the pupil sociograms. Its computation is explained in footnote 1 on page 35.

TABLE 7

Cluster Analysis Showing Sociometric Factors and Initiation Factors for Each Classroom Type (Group)

Classroom Type	Sociometric Factors					Initiation Factors				
	1	2	3	4	5	1	2	3	4	5
Moderate Acceptance	.06	.28	-.28	-1.17	-.63	-.45	-.30	-.20	.03	.37
Low Acceptance	-.05	-.50	-.16	-.08	.29	.08	-.02	-.16	-.51	-.30
High Acceptance	.37	1.18	.52	.74	.47	-.77	-.20	-.35	-.15	-.56
High-Mixed Acceptance	.51	-.35	.49	.97	-.88	.75	-.84	1.01	-1.40	-1.29

TABLE 8

Summary Table of Means Showing Black to White Student Ratio and Teacher Behaviors and Characteristics for Each Classroom Type (Group)

Classroom Type	Ratio B - W (BM/BF/WM/WF)	Warmth/ Spontaneity	Organization	Viewpoint	Stability	Involvement	Expectancy of Learning Success B-W	B+	W+	Teacher Initiations	Percent Teacher/ Student Initiation	Ryan Total
Total Population	6/6.4/7.9/6.8	15.69	19.20	19.63	15.00	6.40				640	.366	19.11
Moderate Acceptance	5.6/6.4/8.1/9.0	17.43	19.14	17.43	15.71	6.86	100%			657	.465	18.63
Low Acceptance	6.3/6.1/7.9/7.1	14.96	19.75	20.25	15.25	5.75	57.1%	7.1%	33.7%	510	.325	19.17
High Acceptance	6.2/7.7/8.8/5.8	15.83	16.17	22.17	15.50	6.17	75%	25%		1528	.530	21.83
High-Mixed Acceptance	5.8/7.0/6.6/6.0	15.80	20.00	20.00	13.60	7.40	80%		20%	353	.246	17.31

Footnotes

[1]Participating teachers completed Turner's Behavior Dimensions of Teaching-Characteristics Schedule which contains six scales to measure personal-social characteristics of teachers: Involvement, Verbal Induction, Stability, Viewpoint, Organization, and Warmth-Spontaneity. These scales are defined by Richard Pugh, Educational and Psychology Measurement, "Evidence for the Validity of the Behavioral Dimensions of Teaching--Characteristics Schedule Scales," as follows:

1. Warm-spontaneous (WS): An estimate of the extent to which the teacher engages in imaginative or resourceful responding in a social context. This scale was derived largely from scale X (warm, friendly) and scale Z (stimulating, imaginative) of Ryan's instrument.
2. Organization (O): An estimate of the extent to which the teacher is systematic and organized. Higher scores on this scale suggest a high level of classroom organization. This scale was derived largely from scale Y (organized, businesslike) and scale Q (attitude toward school staff) of Ryans' instrument.
3. Stability (S): An estimate of the extent to which the teacher has a favorable personal-social orientation. High scores indicate a favorable attitude toward students and a favorable social-emotional orientation. This

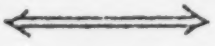
scale was derived largely from scale S (emotional, stability) and scale R (attitude toward pupils) of Ryans' instrument.

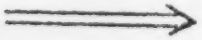
4. Viewpoint (V): An estimate of the degree to which a teacher is pupil-centered (permissive) as opposed to subject-centered (traditional). High scores indicate a greater degree of teacher-centeredness. This scale was developed from scale B (educational viewpoint) of the Ryans' instrument and additional items indicating authority-centering contrasted with authority sharing behaviors.
5. Involvement (I): An estimate of the degree to which the teacher identifies with or is involved in his work. Higher scores on this scale indicate a greater involvement.

[2]"Teacher Competence" was defined as the teacher's total score on the four scales imbedded in Ryan's classroom observation scale, the T modified version of Ryan's Characteristics of Teachers Scale (David G. Ryans. Characteristics of Teachers: Their Description, Comparison, and Appraisal. Washington, D.C.: American Council on Education, 1960.) The Ryans scale includes 20 items which are rated from 1 (low) to 7 (high). Coders rated teachers on the observation scale after each lesson observed and developed a composite score which was compared with the rating of an independent observer. Factor analysis yielded scores on four

factors: Friendly and understanding; Businesslike and responsible; Stimulating and creative; Initiating and excited students. In this study, the four factors were highly correlated (.95 - .99). Therefore, they were reduced to a single factor labeled "Teacher Competence."

[3]To compute the interracial friendship index, the number of 4's was subtracted from the number of 1's for each race/sex category and then divided by the number of students in the target category multiplied by the number of students in the choosing category, to control for unequal N's.

[4]  indicates frequent mutual friendship choices

 one way frequent friendship choices

some mutual friendship choices

---------- friendship rejection

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